

PARTS LIST

SM	Stationary mast assembly
RM	Rotatable mast assembly
M	Mixer
T	Tank
F	Tank floor
10	Upper mast member of SM
11	Lower mast member of SM
14 & 16	Supports
20	Upper mast member of RM
22	Lower mast member of RM
24	Pipe
25	Base of upper mast member 20
26	Block
28	Bottom of base 25
30	L-shaped track
32 & 34	Sides of block 26
36	Vertical section of track 30
38	Horizontal section of track 30
39	Support plate
40	Bearings
41	Support plate
42	Hoist mechanism
44	Power line
46	Foot
48	Bottom of lower mast member 22
50	Base
52	Load bearing assembly
54	Pin
56	Thrust bearing
58	Bushing
60	Spacer
62	Pivot ball
64	Retainer plate

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WHAT IS CLAIMED IS:

1. A self-anchoring mast that deploys a high-speed submersible mixer in a tank, comprising:
 - a) a first mast member;
 - b) a second mast member operably connected to said first mast member; and
 - c) a foot member operably connected to said second mast member to support said self-anchoring mast in a tank.
2. The mast of Claim 1, wherein:
said second mast member comprises attachment means to connect a mixer thereto.
3. The mast of Claim 2, wherein:
said attachment means comprises first and second tracks to slidably receive a bearing of the mixer.
4. The mast of Claim 3, wherein:
said first and second tracks are aligned at approximately a right angle.
5. The mast of Claim 3, wherein:
said first track extends in a first direction that is the same as the axial direction of said first mast member; and
said second track extends in a second direction at approximately a right angle to said first direction.

6. The mast of Claim 5, wherein:

said foot member includes a support base and a bearing assembly;

said bearing assembly is fixedly attached to said second mast member; and

wherein said second mast member is rotatable relative to said support base.

7. A self-anchoring mast that deploys a high-speed submersible mixer in a tank, comprising:

a) an upper mast member;

b) a lower mast member operably connected to said upper mast member;

c) a foot member operably connected to said lower mast member to support said self-anchoring mast in a tank;

d) said lower mast member including attachment means to connect a mixer thereto; and

e) said attachment means comprising first and second tracks that slidably receive a bearing of the mixer.

8. The mast of Claim 7, wherein:

said first track extends axially in the same direction as said upper mast member.

9. The mast of Claim 8, wherein:
said second track extends at approximately a right angle to said upper mast member.
10. The mast of Claim 9, wherein:
said foot member includes a support base and a bearing assembly;
said bearing assembly is fixedly attached to said lower mast member; and
wherein said lower mast member is rotatable relative to said support base.
11. The method of deploying a high-speed submersible mixer in a tank, comprising the steps of:
- a) providing a self-anchoring mast, comprising;
 - i) a first mast member;
 - ii) a second mast member operably connected to said first mast member; and
 - iii) a foot member operably connected to said second mast member for supporting the mast in a tank;

- b) connecting a mixer to the second mast member such that the mixer extends in the same direction as the second mast member;
- c) lowering the mast with the mixer in a tank; and
- d) rotating the mixer relative to the second mast member such that the mixer extends generally transversely thereto.

5

12. The method of Claim 11, further comprising the step of:

- e) further lowering the mast in the tank until the foot member comes to rest on the bottom of the tank.